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GOVERNMENT OF PUNJAB

DEPARTMENT OF RURAL DEVELOPMENT AND PANCHAYATS

NOTIFICATION

The 3rd November, 2022

No.15/731/2022/G2/4359-. The Department of Rural Development and Panchayats Punjab intends to achieve the Goal of Scientific Management of Faecal Sludge and Septage generated in the Rural Areas, which is one of the major sources of pollution of village ponds. In this regard, Department of Science, Technology and Environment in consultation with Stakeholder Departments, has prepared policy on Faecal Sludge and Septage Management (FSSM) in the Rural Areas. Keeping in view the powers of Gram Panchayats, as mentioned in Section 34 and 35 of the Punjab Panchayati Raj Act, 1994, the Governor of Punjab is pleased to lay down the 'The Policy on Faecal Sludge and Septage Management (FSSM) in Rural Areas, 2022' as follows:

Faecal Sludge and Septage Management (FSSM) in the Rural Areas

1. Introduction

1.1 Background:

Proper treatment and management of faecal sludge is integral to safe sanitation practices for ensuring well-being of citizens. However, the Gram Panchayats in India do not effectively monitor the regular cleaning and maintenance of septic tanks. Disposal of collected Septage/faecal sludge is not regulated and sludge is dumped in open drains or in water bodies, or near garbage dumps. Such practices pose considerable health and environmental risks.

1.2 Current Scenario:

According to Census 2011, Punjab's total population is 277.43 lacs. Out of the total population, 173.44 lacs (62.51%) is the rural population and 103.99 lacs (37.49%) is the urban population. Out of total 55.13 lacs Households, 33.58 lacs are the rural Households and 21.55 lacs are the urban Households. Regarding rural sanitation, nearly 75% of rural toilets are attached to septic tanks. Septic tank and single pits overflowing into storm water drains or pathways are prevalent in certain areas. Also, greywater from household is discharged in the same drains flowing outside or nearby. Such drains ultimately end up in water bodies causing pollution. Presently there is no formal system in place for management of faecal sludge and septage from septic tanks.

1.3 Need for Faecal Sludge & Septage Management (FSSM) Policy:

Currently on-site pit latrines and septic tanks account for a substantial proportion of toilets in rural households. The households without toilets have obtained facilities under Swachh Bharat Mission (Grameen) (SBM (G)) and new emerging households are also being provided onsite toilet facilities like twin pit latrines and septic tanks at locations where sewerage systems are not available. The containment of faecal matter will be largely achieved under SBM(G), but its treatment still poses a huge challenge

Further, it has been observed that most of the households do not report cleaning of septic tanks and pits for a number of years in the absence of mechanism for their maintenance and cleaning. Rural areas are mostly served by desludging operators of the nearby ULB and some private players are providing cleaning services but the supply of desludging services is far from adequate. In many instances, faecal sludge and septage is disposed-off in drains and open areas posing considerable health and environmental risks. One common pathway for re-entering of faecal pathogens in environment is the contamination of water bodies and groundwater, by means of overflow and seepage from poorly built sanitation systems. This has a strong negative impact on human health, and one of the strong reasons why rural India has seen only modest improvements in nutrition despite a spike in toilet coverage.

As per the Prohibition of Employment as Manual Scavengers (and their rehabilitation) Act, 2013, manual cleaning/emptying of pit toilets and septic tanks is prohibited. The Designated Authority is required to adopt mechanical processes for cleaning of pits/septic tanks. Most of the Municipal Corporations in Punjab provide mechanized cleaning. However, since the tanks are emptied only once in 8-10 years, the sludge solidified at the bottom of the pit/septic tank, is difficult to remove. Further, in areas unserved by sewer systems, the dumping of sewage by the tankers in the nearby areas has been reported.

Thus, the problem of treatment of septage needs to be addressed in a holistic manner by framing a policy to systematically address the FSSM in the State of Punjab

1. Objectives

2.1 Vision

The vision is to make the rural areas totally sanitized, healthy and liveable with improved onsite

sanitation services vis a vis faecal sludge and septage management so as to ensure the sustenance of providing optimum public health status and clean environment sans pollution.

2.2 Objectives

The key objective of this Policy is to set the context, priorities, and direction for, and to facilitate the state wide implementation of FSSM services in rural areas in such a way so that safe and sustainable sanitation services are available for every household. More specifically, the Policy will:

- (i) Move state on the path of mainstreaming FSSM and ensure that all benefits of safe sanitation accrue to all the citizens across the sanitation value chain with containment, extraction, transportation, treatment, and disposal / re-use of all FS, septage and other liquid waste and their end-products.
- (ii) Suggest and identify ways including the methods and resources, towards creation of an enabling environment for realising safe and sustainable FSSM in State.
- (iii) Define the roles and responsibilities of various departments, Panchayats, agencies and other key stakeholders such as the private sector, civil society organizations, and citizens for effective implementation of FSSM services throughout the State.
- (iv) Converge all Centrally and State Sponsored programmes such as Jal Jeevan Mission, Swachh Bharat Mission (Grameen) [SBM (G)], 14th and 15th Finance Commission, Smart Village Campaign, Rural Development etc. for sustainable sanitation for all.
- (v) While not compromising the eventual compliance to the strict environmental discharge standards already set, recognising the constraints, adopt an appropriate, affordable and incremental approach towards achieving these standards.
- (vi) To make the FSSM an ongoing and sustainable practice across the state with the participation of citizens across the state.
- (vii) Ensuring retrofitting/improvement/upgradation of poorly built containment systems such as single pits and compliance with technical standards of the containment systems in the construction of new toilets and operation of existing toilets.
- (viii) Creating a robust regulatory framework and necessary institutional architecture and basic systems to enable the systematic development and management of rural FSSM services.

3. Terminologies and General Explanations

- **3.1 Black Water:** The wastewater from toilets containing human excreta.
- **3.2 Co-Treatment Facility:** The sewage treatment plant which can treat septage;
- **3.3 Designated Authority means:** The Department of Rural Development and Panchayat of the State of Punjab for implementation of the policy on Faecal Sludge and Septage Management (FSSM) outside the Municipal/Nagar Panchayat limits;
- **3.4 Designated facility:** The facility earmarked by the designated Authority for receipt, treatment and disposal of septage.

- 3.5 **Designated Officer(s):** The designated officer of the Department of Rural Development and Panchayats i.e. Block Development and Panchayat Officer in the State of Punjab.
- **Desludging:** The operation of removing sludge from septic/digestion tanks, pit latrines or any other primary treatment units.
- **3.7 Environmental compensation:** The financial imposition of compensation upon the defaulter for causing damage to the Environment.
- **3.8 Faecal Sludge Treatment Plant (FSTP):** It is the facility where faecal sludge and/or septage is scientifically treated.
- **3.9** Faecal Sludge and Septage Management (FSSM) Plan: It covers the entire service chain starting from design of septic tank, collection, conveyance, safe treatment and reuse or safe disposal of Septage.
- 3.10 Faecal Sludge (FS): It is the solid or settled contents of pit latrines and septic tanks. It is raw or partially digested, in a slurry or semisolid form, the collection, storage or treatment of combinations of excreta and black water, with or without grey water. FS comes from onsite sanitation systems i.e. from pit latrines, non-sewered public ablution blocks, septic tanks, aqua privies and dry toilets. The physical, chemical and biological qualities of FS are influenced by duration of storage, temperature, soil condition and intrusion of groundwater or surface water in septic tanks or pits, performance of septic tanks, and tank emptying technology and pattern.
- **3.11 Gram Panchayat:** An institution of self-government constituted under Article 243B of the Constitution of India, for the rural areas such as villages.
- **3.12 Grey Water:** The wastewater from house cleaning, kitchens, washing areas and bathrooms excluding toilets.
- **3.13 Insanitary latrine:** Any latrine which requires human excreta to be cleaned or otherwise handled manually, either in *situ*, or in an open drain or pit into which the excreta is discharged or flushed out, before its decomposition.
- **3.14 License:** A written permission granted to any individual person, association, agency, department etc. carrying out the Faecal Sludge and Septage management etc.
- **3.15** Licensee: Any person / department / agency / firm holding license for the collection, transportation, treatment and disposal of septage or part thereof.
- **3.16** Licensed vehicle: A vehicle for collection, transportation and disposal of septage registered with Licensee/Department.
- **3.17 Manhole:** An opening through which a person may enter or leave a sewer or other closed structure for inspection, cleaning and other maintenance operations, fitted with a suitable cover for safety.
- **3.18 Pit Latrine**: A latrine with a pit for collection and decomposition of human excreta and from which liquid percolates into the surrounding soil.
- **3.19 Performance Bank Guarantee:** The Guarantee obtained from the Licensee relating to the satisfactory completion of work being carried out in the form of money ensured by the Bank.
- 3.20 Septage: Septage is the settled Solid matter in semi solid condition usually a mixture of solids and water settled at the bottom of septic tank. It has an offensive odor, appearance and high in organics and pathogenic microorganisms. The mixture of liquid and solid material is pumped from a septic tank, cesspool, or such onsite treatment facility after it has accumulated over a period of time. A combination of scum, sludge, and liquid accumulated in the septic tanks Usually, septic tank retains 60% 70% of the solids, oil, and grease that enters it. The scum accumulates on the top and the sludge settles to the bottom comprising 20% 50% of total septic tank volume when pumped.

- 3.21 Sewage: The wastewater containing human body waste matter (faeces and urine etc.), either dissolved or un dissolved, discharged from toilets and other receptacles intended to receive or retain such human body wastes. The effluent coming out of septic tanks or any such facility is also termed as sewage.
- **3.22 Septic tank:** An underground tank that treats sewage by a combination of solids settling and anaerobic digestion. The effluents may be discharged into soak pits or small-bore sewers and the solids have to be pumped out periodically.
- **3.23 Sewerage System:** The underground conduit for the collection of sewage is called Sewer. A network of sewer appurtenances intended for the collection and conveyance of sewage generated from each of the properties to a sewage pumping station for pumping to sewage treatment plant for further treatment and disposal is called sewerage system.
- 3.24 Sanitary Latrine: The latrine and urinal connected to a Septic Tank or Underground Sewerage System.
- 3.25 Twin-pit Latrine: Improved version of the pit latrine with a provision to manage faecal waste by ensuring that it is treated naturally without polluting water bodies or the soil. It has two pits into which faecal matter can flow and these are used alternatively. When the first pit gets filled, it is left unattended and the flow of faecal matter is diverted to the second pit. In the meantime, the contents in the first pit gets degrade and convert into manure which can be used for agriculture purposes or can be sold at a nominal price.
- **3.26 Transportation:** The safe transfer of septage through vehicle from the source of generation of the septage to the designated facility for safe disposal.
- **3.27 Worker(s):** Any person engaged by the Licensee/Department for collection, transportation and disposal of septage or part thereof.

4. Awareness Generation and Capacity Building Activities

Information Education and Communication (IEC) activities and Capacity building campaigns need to be taken up to ensure safe containment and FSSM by rural households to educate various stakeholders. The Communities and Households can be made aware about the importance of safe sanitation practices including scheduled desludging and the incentives to be given. The task should be accomplished by engaging panchayats, private sector contractors, community leaders, NGOs, Community Based Organizations (CBOs), Self Help Groups, block/district level institutions such as schools, colleges, as volunteers etc. The detail of activities is given below:

- (i) Awareness Generation for Residents: Resident Welfare Associations, community organizers, self-help groups and the general public shall be sensitized periodically (quarterly) regarding the need for a sound FSSM. The health hazards associated with improper collection and treatment of waste, and the ill-effects of sewage discharge into fresh water/storm water drains shall be explained to the residents.
- (ii) Capacity Building for Municipal Staff: BDPOs / Panchayat Secretaries shall be well trained in safe Septage Management and its best practices i.e. providing regular training sessions on safe collection, treatment and disposal of septage. Information regarding standard septic tank design, the need for periodic inspection and desludging of Septage, design of designated facility, tender details for engaging transporters, etc. shall be disseminated widely to achieve a safe FSSM. Capacity Funds available under SBM (G) shall be used for this purpose.
- (iii) Capacity building for Septage transporters / private players: Gram Panchayats shall ensure that all safety norms are clearly explained to the Septage transporters. They must be well

trained in safe collection and transportation of septage including vehicle design, process of desludging, safety gears and safe disposal at the nearest designated facility.

(iv) Capacity Building for elected representatives of Gram Panchayats: Gram Panchayats play a very important role in implementation of a proper FSSM in each of their respective panchayat areas. The elected representatives shall be sensitized about the importance of safe Faecal sludge management and role of Panchayats in ensuring the compliances by private operators for collection and transportation of Faecal sludge

5. Guidelines for effective implementation of Faecal Sludge and Septage Management Plan

Septage management includes the process of design, collection, safe treatment and disposal of septage. A comprehensive program that regulates periodic septic tank cleaning, as well as septage transport, treatment, re-use, and disposal is important in the context of our rapidly urbanizing economies. Assessing service performance across the sanitation service chain through a Gram Panchayat / ULB level assessment is the first step in planning process. It is an important exercise, which provides an initial sense of the state of septage facility in the local body, help in understanding the context and identifying gaps in key services. The sanitation service chain considers the following 5 stages:

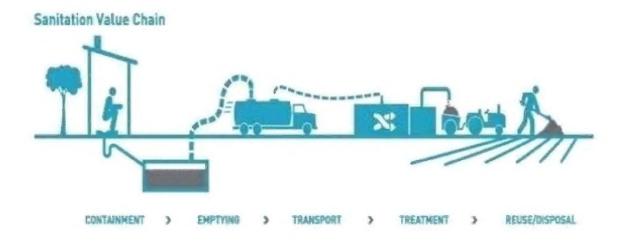


Figure-I: Sanitation Value Chain

Detailed assessment of services will need to be done across each link in the chain through appropriate field assessments:

5.1 Access and Containment:

- (i) Access describes the type of toilet and captures if the House Hold (HH) uses individual, shared or community facility. The choice of User Interface will depend on the availability of water. At Gram Panchayats level, it also measures the availability of public toilets. For sullage disposal, it captures access to bathroom facilities and drainage outlets.
- (ii) Containment describes the ways of collecting, storing, and sometimes treating the excreta, grey water generated at the User Interface. The toilet may be connected to sewerage system; onsite systems like septic tank with soak pits, or may be functioning as Eco-san / composting toilets. Similarly, for grey water disposal, the HHs may be connected to sewerage system or drains of any kind (Open/covered).

5.1.1 Steps for assessment of existing toilets and septic tanks and creation of database:

- (i) Gram Panchayat shall either use existing database or create database of toilets and septic tanks. All Gram Panchayats shall link the key results related to toilet availability, type of toilet and its connection with wastewater outlet on e- governance platform. This database shall be updated from time to time.
- (ii) Convert insanitary latrines to sanitary latrines for safe collection and disposal of waste as per norms. For this, incentive available under SBM (G) and other sources shall be used.
- (iii) All existing septic tanks shall have access covers for each chamber, so that they can be easily opened during emptying process.
- (iv) The new septic tanks need to be designed and constructed as per the norms suggested according to IS 2470: 1985 Part I and II and CPHEEO Manual, 2013

5.1.2 Steps of assessment for retrofitting/upgrading containment systems:

- (i) Converting single pit latrines to twin pit, by adding an additional pit.
- (ii) Correcting defective septic tanks (e.g. adding the chamber separation wall, sealing the bottom, etc.).
- (iii) Improving twin pits (e.g. ensuring functional junction chamber, honeycombing or perforations in pit wall, adequate distance between pits, safe distance from water sources, etc.).
- (iv) Installation/retrofitting of alternative twin pit diversion mechanisms which are easy and safe to install and use, for example SATO V-trap connection system which makes switching between the twin pits easy and safe (as it does not require physical contact with the outlet pipe for diverting flow into the other pit and is thus aseptically operated)
- (v) Improving technologies and replacing leach-pit latrines with appropriate technologies in challenging geographies such as high-water table, rocky areas, etc. (example bio toilets, composting toilets, raised toilets, etc.)

5.2 Conveyance and Emptying

Conveyance and Emptying describes the transport of products across the service chain. Gram Panchayats shall plan for scheduled septic tank emptying services for effective implementation of FSSM plan. Prior to planning for the same, Gram Panchayats shall first assess its role and capacity for implementation of the same. Gram Panchayats shall assess various aspects of septic tank emptying like how many septic tanks are required to be emptied annually as per CPHEEO versus how many are

emptied in a year, how many vacuum emptying trucks / capacity of trucks are required if number of septic tanks emptied as per CPHEEO versus how many trucks are available/working with capacities of emptier trucks, assessing the cost per emptying visit, method of maintaining the register for septic tank emptying services database etc.

5.2.1 Steps for Scheduled Septic Tank Emptying Services

- (i) Gram Panchayats shall initiate pre-determined scheduled septic tank emptying services and develop a route plan for the same.
- Mobilize or procure adequate number of suction emptier trucks to maintain a rotating cycle. Number and type of vehicles to be purchased shall be based on the sizes of septic tanks or septage generation rate, distance from the location of septic tanks to the designated facility, cleaning frequency of septic tanks and available road width for the suction truck operations.
- (iii) Gram Panchayat shall make the mandate to emptying the septic tank of every household once in three years and maintain the record in a register for next cycle of emptying the same septic tank. Gram Panchayat may nominate the Chowkidar/any staff to maintain the register and ensure the record of every household.
- (iv) Gram Panchayats to ensure that only licensed private operators with GPS enabled vehicles are allowed to empty the septic tanks in households. The rates are also to be standardized by empanelment of private operators at block level and district levels

5.3 Treatment

Gram Panchayats must not dispose the septage collected from septic tank without any treatment and must comply with CPCB and SPCB norms. The treatment of septage is dependent on the two factors i.e. feasibility of the site where treatment is to be given and type of the treatment to be given to the septage for its effective disposal. The details of these factors are provided herein below

5.3.1 Identification of septage treatment site

The site identification is crucial for effective implementation of septage management plan. Following parameters are to be taken into consideration before finalization of treatment sites by the Gram Panchayats:

- (i) First assess the load of septage and then the possibility of Septage treatment at existing STPs located within 20 KMs from the project site.
- (ii) If existing treatment facility is not within the range of 20 Kms, then a new septage treatment site may be located as per requirement but reasonably at an appropriate distance from the residential areas.
- (iii) Assessment of existing geological conditions on site like groundwater table, type of soil,

prone to flooding as they may directly affect selection of type of treatment.

5.3.2 Types of Treatment of Faecal Sludge and Septage

Treatment can be of two types, treatment at sewage treatment plants and at independent septage treatment plants. The details of these two types of treatment are given in the section below:

5.3.2.1 Treatment of Septage/Faecal Sludge at Sewage Treatment Plants:

Co-treatment of septage along with domestic sewage at a sewage treatment plant (STP), if available, is the most desirable option. Though septage is more concentrated in its strength than domestic sewage, its constituents are similar to municipal wastewater. But care should be taken that the STP should have adequate capacity to accept the septage without hampering the functioning of the sewage treatment plant. The Septage could be added at various locations for treating it along with STP wastewater:

- (i) Septage addition at the nearest sewer manhole: Septage shall be added to a sewer upstream of the STP, and substantial dilution of Septage occurs prior to it reaching the STP, depending on the volume of sewage flowing in the sewer
- (ii) Septage addition at the STP: Septage shall be added to sewage immediately upstream of the screening and grit removal processes
- (iii) Septage addition to sludge digesters/sludge drying beds: Septage may be processed with the sludge processing units of STP.

If Septage/faecal sludge are to be co-treated with sewage, it will be necessary to construct a Septage /faecal sludge receiving chamber. Chemicals such as lime or chlorine may also be added to the faecal sludge in the storage tank to neutralize it, to render it more treatable, or to reduce odors. Statutory approvals from respective departments, based on technical feasibility of disposal of Faecal sludge in the STP must be obtained before using STPs for FSSM. Directive of the MoHUA and MoJS vide DO no S-18011/6/2021-SBM-DWSS dated 14.09.2021 (Annexure A) and revisions/amendments, if any, in this regard shall be adhered.

5.3.3 Treatment of Septage/Faecal Sludge at Independent Septage Treatment Plants

When an STP does not exist, or the distance or the capacity of the available plant becomes a limiting factor, it is not a feasible option to transport and treat the septage at the sewage treatment facilities. Hence, a treatment plant especially meant for septage treatment becomes the option to consider. Independent septage treatment plants are designed specifically for septage treatment and usually have separate unit processes to handle both the liquid and solid portions of septage. These include:

- (i) Lime stabilization odor control, conditioning and stabilization of the sludge.
- (ii) Dewatering sludge drying beds or mechanical dewatering.

(iii) Anaerobic / aerobic wastewater treatment - liquid from the sludge drying beds and mechanical dewatering systems.

(iv) Co-composting with organic solid waste

The choice of mechanical dewatering or sludge drying beds is dependent on the land availability, with mechanical dewatering systems being preferred where land is scarce and sludge drying beds being adopted where land availability is not a constraint. Many septage treatment plants use lime to provide both conditioning and stabilization before the septage is dewatered, and this dewatered sludge can be used as organic fertilizer after drying and composting. Additionally, lime stabilization also helps to reduce/minimize odor. The common practice is to add lime to raise the pH to 12 and hold it for a period of 30 minutes. The filtrate from the dewatering units needs to be further treated through treatment, process such as waste stabilization ponds, anaerobic baffled reactor, constructed wetland or aerobic treatment systems before discharging into the environment.

From review of various options for the Septage treatment, it was observed that treatment options could broadly be divided into two types. One form of technology is to convert faecal sludge/Septage to compost and another is to convert Septage to energy. These technologies can be grouped as shown in the figure. Details of feasibility must be studied before implementation of appropriate technology.

Directive of the MoHUA and MoJS vide DO no S-18011/6/2021-SBM-DWSS dated 14.09.2021 (Annexure A) and revisions/amendments, if any, in this regard shall be adhered

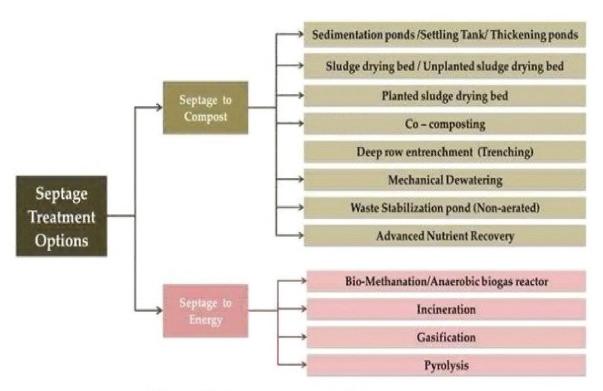


Figure- II: Septage treatment Options

5.4 Safe reuse/disposal of treated septage

The methods in which products are ultimately returned to the environment, as either useful resources or reduced-risk materials. Dewatered septage/sludge can be used as fertilizer in agriculture application, it should satisfy the following criteria of Class A Bio-solids of US EPA: A faecal coliform density of less than 1000 MPN/gm of total dry solids, Salmonella sp. density of less than 3 MPN per 4 g of total dry solids. WHO (2006) suggests Helminth egg concentration of <1/g total solids and E coli of 1000/g total solids in treated septage for use in agriculture. The quality for compost has been given in the Part A Standards for Composting in Schedule-II - Standards of processing and treatment of solid waste in Solid Waste Management Rules, 2016.

In the absence of any standards, it is recommended that these be adopted until such time standards are notified by the Central Pollution Control Board. Properly treated sludge can be reused to reclaim **barren** land by application as soil conditioner, and/or as a fertilizer. Deteriorated land areas, which cannot support the plant vegetation due to lack of nutrients, soil organic matter, low pH and low water holding capacity, can be reclaimed and improved by the application of treated septage. Septage sludge, as a result of lime stabilization has pH buffering capacity that is beneficial for the reclamation of acidic soils. Treated septage contains nutrients in considerable amounts, which supports the growth of a number of plants.

Drip irrigation is the preferred irrigation method for settled septage effluent when irrigation is feasible. Crops which could be safely grown are corn, fodder, cotton, trees including fruit trees, eucalyptus and poplar.

Aquaculture can be practiced for settled septage effluent when freshwater is available to achieve dilution to ensure dissolved oxygen is above 4 mg/l. Fish species of tilapia and carp are preferred since they tolerate low dissolved oxygen. Both drip irrigation and aquaculture need land and are feasible at city outskirts.

5.5 Preference of appropriate FSSM

The choice of an appropriate Faecal Sludge and Septage management system is dependent on land availability, local site conditions, level of treatment required, hauling distance, technical requirements, costing, requirement of expertise for construction and operation, availability of skilled labour, legal and regulatory requirements. The management option selected shall be in conformity with Local, State and Central Regulations. The following points shall be considered for Faecal Sludge and Septage Management (FSSM) by the Gram Panchayats:

- (i) Single Pit Latrines shall be retrofitted with Twin Pit Latrines.
- (ii) Co-treatment of septage in the waste stabilization ponds, wherever exist, shall be preferred
- (iii) Co-treatment of septage along with domestic sewage at a Sewage Treatment Plant (STP), if available within 20 km from the project site, is the most desirable option as detailed above at Sr. No. 5.3.2.1. The care must be taken that the STP shall have adequate capacity to accept the septage without hampering the functioning of STP.
- (iv) In case the STP does not exist nearby or the capacity of the available STP becomes a limiting factor, in that case the most feasible and economical option may be selected from the options as mentioned in figure-II above, for converting the septage to compost/energy. Gram Panchayats shall carry out primary assessment for availability of market and demand for reuse of treated septage. The compost prepared after treatment shall be utilized as manure in agricultural fields etc. The prepared compost may be sold by the licensee and any revenue accruing out of the activity may be utilized thereof.

5.6 Implementation of FSSM

Gram Panchayats shall either provide collection, treatment, transportation & disposal services fully or part thereof by themselves or **licensee**. The criteria for selection and duties of Licensee are provided herein below.

5.6.1 Criteria for selecting the Licensee

- i) Department of Rural Development and Panchayat shall lay down criteria for selection of Licensee.
- ii) The Block Development and Panchayat Officer (BDPO) shall be the designated officer to issue license for collection, transportation, treatment and disposal of septage to the designated facility. The Licensee shall be selected by the designated officer through open advertisement.
- iii) The Designated Authority shall charge non-refundable application fee, as prescribed from time to time, to process the application for grant of license. The license shall remain valid for a period of 3 years from the date of issue, unless revoked earlier and shall be renewable on its expiry subject to fulfillment of terms and conditions of License and on payment of fee prescribed for renewal.
- iv) The Licensee shall deposit performance guarantee, in the form of Bank Guarantee which will be forfeited in case of any violation. The Licensee shall have leak proof, odor and spill proof transporting vehicles with proper vacuum suction and discharging arrangements. Vehicle should have active GPS device, first aid box, adequate arrangement for storage water required for desludging, proper colour marking & specific description, capacity, registration details of service provider clearly marked on the body of the vehicle.
- v) The vehicles shall have valid registration of the Transport Department of the State. It shall also be GPS enabled and its movement data is to be kept by operator for a stipulated period as deemed suitable.
- vi) The bidding price quoted by the Licensee to be selected shall be in consonance with the User Charges fixed by the Designated Officer.
- vii) The Licensee shall have workers adequately trained for this purpose.
- viii) The workers shall be equipped with safety gears and other protective equipment required to safely collect, transport and dispose off the septage at the designated facilities.

5.6.2 Duties of the Licensee

- (i) The Licensee shall submit the application for obtaining license in Form-I for Collection, Transportation, Treatment and Disposal of septage or part thereof.
- (ii) The Licensee shall empty the septic tanks but a small amount of sludge of around 1 to 2 inches shall be left in the septic tank to facilitate decomposing of incoming faecal waste.
- (iii) The septage shall be collected and transported only through the Licensed vehicles.
- (iv) The Licensee shall prepare 4 copies of the manifest in Form -II comprising of color code indicated below and all the 4 copies shall be signed by the sender.

Table-I

Copy number with color code	Purpose
Copy 1 (White)	To be given by the Licensee to the septage generator of the building/premises after taking his/her signature on the other copies.
Copy 2 (Yellow)	To be retained by the receiver after receiving the septage and the remaining two copies are to be duly signed by the receiver.
Copy 3 (Pink)	To be handed over to the Licensee by the receiver afteraccepting waste.
Copy 4 (Orange)	To be sent by the receiver to the Designated Officer.

- (v) The Licensee shall collect the user charges from the individual households/ other establishments for collection, transportation, treatment and disposal of septage or part thereof, as finalized by the designated officer.
- (vi) The Licensee shall pay fee to the designated facility, as finalized by the Designated Officer.
- (vii) The Licensee shall be solely responsible for any damage caused to any person, vehicles, property and environment in the eventuality of any accident or disaster and shall be liable to pay the damage charges/ compensation, if any imposed by the Designated Authority/ Court of law thereto the victims / their legal heirs.
- (viii) The Licensee shall be responsible for taking all safety measures including provision of handheld gas detectors, gas masks, protective gear, first aid box etc. and such other measures as specified in the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 and Rules made there under.
- (ix) The Licensee shall dispose off the septage only at the designated facility.
- (x) The Licensee shall be responsible for regular health checkups of their workers at least **four times in** a year and submit record of the same to the Designated Authority.
- (xi) The workers deployed by the Licensee shall be insured to cover compensation to be paid to the victims / their legal heirs under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 or any order passed by the Competent Court of Law in the eventuality of accident during the process of cleaning, transportation and disposal of septage.
- (xii) In case of violation of any of the provisions of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, the Licensee shall be liable to pay penalty as notified from time to time by the designated authority including the cancellation of license and forfeiture of Performance Bank Guarantee as per the recommendations of the designated officer.
- (xiii) Licensee shall ensure that all vehicles are suitably covered under statutory Insurances and the same is to be extended to the staff as well

(xiv) The Designated Officer may assign additional duties to the Licensee as per requirement.

5.7 Financial resource mobilization to implement FSSM by Gram Panchayats

- (i) The funds from Finance Commission (FC), other State and Centrally sponsored schemes and other sources shall be utilized as per their guidelines to implement the various components related to FSSM plan.
- (ii) Information Education Communication (IEC) & Capacity building funds: IEC funds under SBM (G) shall be utilized for various awareness generation activities undertaken for implementing septage management plan includes capacity building activities for Gram Panchayat, septage transporters, treatment plant operators and residents.
- (iii) Convergence with existing schemes/activity: If any Gram Panchayat is going to undertake the water audit survey or survey under SBM or property tax assessment etc., then Gram Panchayat shall integrate the sanitation survey with the respective activity.
- (iv) The fee collected by the Licensee for collection, transportation, treatment and disposal of septage or part thereof from individual household shall be utilized to meet their expenses.
- (v) Transport charges shall be determined and publicized based on market rates by the designated authority while ensuring that residents are not exploited by the tanker operators.
 Roles and Responsibilities of the Concerned Authorities

6. Roles and Responsibilities of the Concerned Authorities

6.1 Implementation of FSSM Plan

Sr. No.	Department/ Board/ Authority/ Agency		Role and Responsibilities				
1.	Gram Panchayat (GP)	(i)	To identify the designated facility for septage disposal.				
		(ii)	Selection of the Licensee from the registered list.				
		(iii) Collection of User Charges from the individual households/ establishments.					
		(iv) To monitor the effective implementation of FSSMPlan in Rural Areas.					
		(v)	Coordination with Urban Local Bodies/MCs/ PWSSB/Department of Housing and Urban Development/PSIEC for identification of STPs (if available) having capacity to take septage load.				
		(vi)	Identification of suitable land for septage treatment of a village or cluster of villages.				
		(vii)	To regulate cleaning of septic tanks and their septage management through Licensee.				
		(viii)	To coordinate with Licensee for conveyance of septage to STPs/designated facility.				

Sr. No.	Department/ Board/ Authority/ Agency	Role and Responsibilities						
2.	Household	(i)	To coordinate with registered licensee for emptying of the septic tank in consultation with Gram Panchayat.					
		(ii)	Payment of user charges for FSSM services as decidedby DRDP.					
3.	Urban Local Bodies/ MCs/ PWSSB / Department of Housing and Urban Development/PunjabSmall Industries and Export Corporation limited (PSIEC)	(i)	To inform the Gram Panchayats regarding the capacity of their STPs (if available) to take septage load.					
4.	Department of Water Supply and Sanitation	(i)	To provide technical assistance for designing FSSM program.					
	(DWSS)	(ii)	To assist the Gram Panchayats in finalizing the Licensee.					
		(iii)	To inform the Gram Panchayats regarding the capacity of their STPs (if available) to take septage load.					
		(iv)	To provide financial assistance through various schemes of State and Central Government.					
5.	Department of Rural (i) Development and		To coordinate with Gram Panchayats and District Administration for implementation of FSSM.					
	Panchayat (DRDP)	(ii)	Selection of the Licensee by BDPO with technical assistance of DWSS.					
		(iii)	Finalization of User Charges by BDPO to be paid byindividual households/ establishments.					
		(iv)	Setting up the Grievance redressal mechanism.					
		(v)	To provide financial assistance through various schemes of State and Central Government.					
		(vi)	Training and capacity building of Stakeholders.					
6.	Punjab PollutionControl Board	(i)	To monitor the violation in the implementation of FSSM Plan.					
		(ii)	To analyse the samples of septage and compost.					
		(iii)	Enforcement of relevant laws and rules.					
7.	District Administration	(i)	To monitor the effective implementation of FSSM Plan as part of District Environment Plan					
8.	Licensee	(i)	Safe transportation of septage from project site to the designated facility					
			Training of the workforce engaged in FSSM Plan					
			Provide requisite safety gears to the workers					
			Regular health check-up of workers					
		(v)	Deposit license fee with BDPO					

7. Existing Legal Framework

There are certain provisions in the following Laws, Acts, Codes and Frameworks, which can be made applicable for the purpose of regulation and violation of the provisions of FSSM policy in the State.

7.1 Code of Criminal Procedure

i) Section 133

Conditional order for removal of nuisance- Whenever a District Magistrate or a Sub-divisional Magistrate or any other Executive Magistrate specially empowered in this behalf by the State Government on receiving the report of a police officer or other information and on taking such evidence (if any) as he thinks fit, considers that any unlawful obstruction or nuisance should be removed from any public place or from any way, river or channel which is or may be lawfully used by the public

7.2 Indian Penal Code 1860

Chapter XIV: Of offences affecting the Public Health, Safety, Convenience, Decency and Morals

i) Section 268

Public nuisance - A person is guilty of a public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, danger, or annoyance to persons who may have occasion to use any public right.

ii) Section 277

Fouling water of public spring or reservoir - Whoever, voluntarily corrupts or fouls the water of any spring or reservoir, so as to render it less fit for the purpose for which it is ordinarily used, shall be punished with imprisonment of either description for a term which may extend three months or with fine which may extend to five hundred rupees.

7.3 Northern India Canal and Drainage Act, 1873 Part X Section 70 (5): Offences and Penalties:

Whoever, without proper authority and voluntarily corrupts or fouls the water of any canal so as to render it less fit for the purposes for which it is ordinarily used is liable to be penalized.

7.4 Punjab Minor Canals Act, 1905 Chapter V Provisions Applicable to all Canals Section71 (5) Offences under the Act

Whoever without proper authority and voluntarily corrupts or fouls the water of any canal so as to render it less fit for the purposes for which it is ordinarily used is an offence under the Act.

7.5 Environmental Laws

- (i) The Water (Prevention and Control of Pollution) Act, 1974
- (ii) The Environment (Protection) Act, 1986)

7.6 Codes and Frameworks:

- (i) The provisions of the National Building Code of India published by the Bureau of Indian Standards (BIS) as applicable for septic tanks, soakage pits, cess pools, leach pits, drainage fields, amongst others also come within the ambit.
- (ii) IS 2470: 1985 Part I and II Code of Practice of Installation of Septic Tanks: This code lays down recommendations for the design, layout, construction and maintenance of septic tanks and Secondary treatment and disposal of septic tank effluent. It is applicable to houses, flats, residential housing colonies, hostels and boarding schools where the number of users does not exceed 300 persons.
- (iii) IS 12314: 1987 Code of Practice for Sanitation with Leaching Pits for Rural Communities: This code covers the low-cost latrines structure, method of safe storage and digestion of sludge and maintenance of such latrines.

7.7 The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993

The Act, 1993 has put a ban on the use of dry latrines i.e. latrines with no water-seal or flushing mechanism, and prohibits employment of persons for manually carrying human excreta which is referred to as night soil. This was supplemented in 2013 with the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 by which "hazardous cleaning" in relation to sewers and septic tanks was also banned. The safety norms for compliance are provided in the Central Public Health and Environmental Engineering Organisation (CPHEEO) Sewerage and Sewage Treatment Manual, 2013.

7.8 Solid Waste Management (SWM) Rules, 2016

These Rules under the Environment (Protection) Act, 1986 apply for the final and safe disposal of post-processed residual septage to prevent contamination of groundwater, surface water and ambient air. These Rules will also apply on the disposal and treatment of septage, before or after processing, at sanitary landfills and use as compost. The violation of the provisions of Solid Waste Management (SWM) Rules, 2016 is punishable u/s 15 of the Environment (Protection) Act, 1986

The concerned departments shall initiate action against the violators and offenders as per the provisions of the aforesaid Acts and other provisions of relevant Laws for the effective implementation of Faecal Sludge and Septage Management Policy in the State of Punjab.

8. Monitoring Mechanism

- (i) Record keeping and manifest forms shall be an integral part of the comprehensive Septage management program.
- (ii) The document or documents complete in all respect with signatures of the household/property, suction truck operator and treatment plant operator shall be submitted to the Gram Panchayat through BDPO for their records.
- (iii) The BDPO shall maintain the monthly record of the Septage management in Form-III
- (iv) Consumer grievance redressal system for faecal sludge management shall also be set up and helpline numbers to be shared with residents as a part of monitoring mechanism.

9. Imposition of Environmental Compensation (EC), Procedure and Appeals

- 9.1 EC for the irregularities committed by the Households, Licensee, Companies, Establishment(s), Person(s), Individual(s)
 - (i) Whosoever fails to comply with the provisions of the policy instrument, shall be liable to pay Environmental Compensation for causing damage to the Environment in the following terms.
 - a) Rupees 5 thousand for the first time offence.
 - b) Rupees 10 thousand for the second time offence
 - c) Rupees 20 thousand for the third time and subsequent offence.
- (ii) Licensee shall also be penalized for the non-compliance of their performance indicators as below:
 - a) For improper safety equipment of staff doing collection and transportation of septage.
 - b) For dumping of collected septage on non-designated location.
 - c) For collection of septage in a non-designated village.
 - d) For leakage in vehicle (reported by village or any other person)
 - (iii) In case, the offender fails to deposit the EC with the department, the amount of EC shall be recovered from the offender as arrears of land revenue
 - 9.2 Officer Authorized to Impose EC

The EC shall be imposed by the Block Development and Panchayat Officer (BDPO) or an officer above the level of BDPO, by passing of an order mentioning the details of the irregularity committed

9.3 Appeals

Any person aggrieved by an order made by the authorized officer under the policy instrument, for imposition of EC may within a period of 30 days from the date on which order is communicated to him, prefer to the (Deputy Commissioner) higher authority in hierarchical structure of the Department

9.4 Acceptance or Rejection of Appeal

The Appellate Authority after hearing the parties, may either accept the appeal or in case not satisfied with the contentions made by the appellant, may reject the appeal.

9.5 Separate head for EC funds

The amount of Environmental Compensation, so recovered by the department from the defaulters shall be kept in a separate head.

9.6 Use of EC funds for restoration of Environment

The funds of Environmental Compensation shall only be used for the purpose of restoration of Environment and matters incidental thereto with the approval of the Secretary of the Department of Rural Development and Panchayat.

10. Short title, Application, Commencement, Modification or Amendment to the Policy Instrument

- 10.1 The policy instrument may be called 'The Policy on Faecal Sludge and Septage Management (FSSM) in Rural Areas, 2022'
- 10.2 The policy instrument shall be applicable in the Rural Areas of the whole State of Punjab.
- 10.3 The policy instrument shall come into force w.e.f. from the date of publication of Gazette Notification and shall be valid for three years from the date of implementation.
- 10.4 Modifications and amendments may be carried out by the State Government after obtaining approval from Minister incharge Rural Development and Panchayats, Punjab from time to time for effective implementation of the policy instrument on FSSM.
- 10.5 The policy instrument shall be reviewed after three years, taking into account the working experience and other relevant aspects related to the policy or the matters incidental thereto.

11. FORM

11.1 Form - I

Peforma of Application for the License for Collection, Transportation and Disposal of Septage. [Clause 5.6.2 (i)]

11.2 Form - II

Performa of Collection and Transport Records. [Clause 5.6.2(iv)]

11.3 Form - III

Performa of Septage Management Record. [Clause 8(iii)]

12. ANNEXURES

12.1 Annexure - A

Copy of DO no S-18011/6/2021-SBM-DWSS dated 14.09.2021 issued by MoHUA and MoJS.

K. SIVA PRASAD

Financial Commissioner to Government of Punjab, Department of Rural Development and Panchayats.

Form I

PEFORMA OF APPLICATION FOR THE LICENSE FOR COLLECTION, TRANSPORTATION AND DISPOSAL OF SEPTAGE

[Clause 5.6.2 (i)]

То				
				PASTE PHOTO
				(SELF ATTESTED)
	1.	Name of the	annlicant: Shri/Ms	s
	2.	Nationality Nationality		Others
	3.	Address:		
			Head Office:	
			Head Office.	
	4.	Telephone N	o.: (o)N	Mobile:email:
	5.	Registration	No. of Vehicle:	
	6.			cle valid upto:
	7.			pto:
	8.	Fitness of the	e vehicle valid upto	D:
	9.	Whether veh	icle is fitted with C	GPS:
	10.			g leak proof, odour and spill proof having proper vacuum/suction Documentary proof may be enclosed)
	11.	Processing fe	e for License Rs	
		(As prescribe	ed by the Authority	⁷)
		DD No.:	Date:_	Bank:
beli by t	ef. he s	I also certify the same. I agree t	hat I have read and	me/us in column 1 to 11 is true to the best of my knowledge ard understood the attached terms and conditions and agree to abidition given by me is found wrong, the application for License shape
				Signature of the Authorized Signator

Form II PERFORMA OF COLLECTION AND TRANSPORT RECORDS [Clause 5.6.2(iv)]

		Samp	ole Form to be fil	led by Licensee
I.	Identificati	on of Waste		
a)	Volume:			
b)	Type:	Septic Tank		
c)	Address:			_
II.	Details of W	aste Generator:		
a)	Name:			
p)		per:		
c)	Address:			_
d)	Pin:			
,		heing duly authorize	d does hereby se	rtify the accuracy of the source and type of
Da	te:	Signature (of t	he generator own	er occupier)
		ransporter/Operator	r:	
	Company Na			
	Permit No.: Vehicle Lice	ince.		
	Pump out da			
-,	Turnp out au			
		ibed waste water was ged. I certify that the		posed by me to the disposal facility name below and correct.
Sig	gnature of the	authorized agent and	title:	
IV	. Accepted by	/	nuthorized SPS/S	TP by the concerned Authority.
Th	e above transp	oorter delivered the de	escribed Septage t	o this disposal and it was accepted.
Dis	sposal Date	Amo	unt Collected fron	ı Transporter
Sig	gnature of the	authorized signatory	and title:	

Form III PERFORMA OF SEPTAGE MANAGEMENT RECORD

[Clause 8(iii)]

SN	Area and Location	Date of Completed de- sludging	 Quantity of Fecal Sludge/ septage de- sludged	Charges	Any Accident/ Slippage	Next date of Sludging	Remarks

[Signature of BDPO]

Annexure - A

Copy of DO no S-18011/6/2021-SBM-DWSS dated 14.09.2021 issued by MoHUA and MoJS



D.O., No. S-18011/6/2021-SBM-DDWS

September 14, 2021

As you are aware, flagship national sanitation programmes are being implemented under aegis of Ministry of Housing and Urban Affairs (MoH&UA) and Ministry of Jal Shakti, [Department of Drinking Water and Sanitation (DDWS)] in urban and rural areas of the country, respectively. MoH&UA, through the Swachh Bharat Mission (Urban) [SBM(U)] and AMRUT programs has been focusing, on making arrangements for comprehensive management of liquid and solid waste (including plastic waste) in urban areas. Similarly, DDWS, through Swachh Bharat Mission (Grameen) [SBM(G)] Phase-II is focusing on solid and liquid waste management (including faecal sludge and plastic waste) in rural areas. At the State level, these programs are being coordinated generally by the Departments concerned with urban affairs and rural development. Depending on the State level implementation strategies, the actual project execution is taken up by respective Urban Local Bodies (ULBs) and Rural Local Bodies (RLBs) or in a cluster approach.

2. Under SBM(U), 2.0 and AMRUT (Jal Jeevan Mission(U)) programs, it has been planned to undertake construction of integrated Sewage Treatment facilities with arrangements for co-processing of feacal septage from onsite units (septic tanks). Under SBM(G) Phase-II, emphasis has been given on low-cost toilet technologies for onsite management of faecal matter and for co-treatment at an existing or planned STPs/ FSTPs in the neighbouring urban area in the district, where onsite management of faecal waste is not possible and where the villages is situated within a radius of 10-15 kms from the aforestated urban areas. For those villages, where these options are not feasible, stand-alone faecal septage management systems which are

easy to operate and maintain (viz. trenching, planted drying beds and unplanted drying beds) are to be taken up. Besides, it has been envisaged to engage private facilities/service providers in urban areas for mechanical cleaning of septic tanks/single pits in rural areas and transportation of faecal septage to nearby STPs/FSTPs.

- 3. For plastic waste management, the principles of 4R Refuse, Reduce, Reuse and Recycle are being adopted in both urban and rural sanitation programs. Under SBM(G), provision for funding support to the GPs and Blocks for collection, transportation, segregation and storage at village level and setting up Plastic Waste Management Units (PWMU)/Material Recovery Facilities (MRF) at Block level has been made. It has been also envisaged to use such existing PWMU/MRF in urban areas, which have the capacity to serve the requirements of rural areas. Services of existing service providers/entrepreneurs in the urban areas are to be used for forward linkages for transportation of plastic waste from village/GP to PWMU/MRF and final disposal of plastic waste after its processing in PWMUs of rural areas.
- 4. As would be appreciated, the focus is on achieving economy of scale and effort through adoption of a co-ordinated approach to deal with transportable waste- the faecal septage and plastic, which covers the entire district, where possible, without being hindered by the urban-rural divide. SBM(G) Phase-II Guidelines also cater for representation of State urban development departments (UDD)/ULBs in its various committees viz. National Scheme Sanctioning Committee at national level, State Water and Sanitation Mission and District Water and Sanitation Mission at State and district levels.
- 5. For this purpose, the State and district authorities will need to closely look at the nature of urban rural distribution of population in a district. In the first instance, where the district is predominantly urban (>70% population residing in urban areas)-
 - The districts authorities in collaboration with Urban Local Bodies may work out a plan to ensure that existing/ under construction STPs/FTSPs in the urban areas are able to cater for treatment of faecal septage from rural areas lying within a suitable turnaround distance

(2-3 hrs) from plant location in the urban centre(s). The desludging and transportation operators responsible for urban onsite systems could also scale up their resources to cater for faecal septage from such rural areas.

- Similarly, the districts authorities in collaboration with Urban Local Bodies may plan transportation of plastic waste from rural areas to the MRF/PWMU through the existing service providers in urban areas.
- District authorities in coordination with ULBs may facilitate to establish forward linkages with existing entrepreneurs/service providers for final disposal of plastic waste after its processing in PWMUs of rural areas.
- o In the case of construction of future STPs/FSTPs and MRF/PWMU under AMRUT/SBM (U)/other schemes, the local bodies (both urban and rural) may jointly plan in a way that the resultant capacity is able to cater to the entire catchment area's population. In such cases, a joint coordination group may be formed at the district level to facilitate such convergence mechanism.
- o The MoHU&A has recently released a toll-free number (14420) to facilitate safe and timely management of cleaning of septic tank and sewer by only registered *Private Sanitation Service Organisations* (*PSSOs*) empanelled by the Responsible Sanitation Authority (RSA). This needs to be propagated in rural areas as well to ensure safe mechanized cleaning of septic tank and sewers in villages through empanelled and competent professionals. The charges for various services offered by the PSSOs are to be fixed by the RSA.
- District authorities should publicize provisions of the Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act and requirement of mechanized cleaning. A campaign in each district in urban as well as rural areas should be undertaken for the same.
- 6. The above cluster approach can be suitably modified for districts with lesser urbanization. As a thumb rule, the agency responsible to manage any plant/ facility should be ordinarily able to take up an additional 20-25% load through proper planning and economical retrofitting.

7. You are, therefore, requested to issue necessary directions to all the concerned to ensure that an integrated approach may be adopted by both urban and rural authorities for preparation of convergent action plan for implementation of faecal septage and plastic waste management in both

rural and urban areas in a district.

(Pankaj Kumar) Secretary

Dept. of Drinking Water &

Sanitation Ministry of Jal Shakti Government of India (Durga Shanker Mishra) Secretary

Ministry of Housing & Urban

Affairs

Government of India

To

Chief Secretaries /Administrators/Advisors to Lt. Governors

All States/UTs

2694/11-2022/Pb. Govt. Press, S.A.S. Nagar